SEQUENCE LISTING

<110> Vojdani, Aristo

<120> IDENTIFICATION OF ETIOLOGY OF AUTISM

<130> IMSCI2.008A

<140> 10/770,712
<141> 2004-02-03

<160> 133

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Leu Val Thr Ile Ile Thr Val Pro Val Val Leu Leu Asn Lys Gly Thr
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Asp Asp Ala Thr Ala Asp Ser Arg Lys Thr Tyr Thr Leu Thr Asp Tyr
35 40 45
Leu Lys Asn Thr Tyr Arg Leu Lys Leu Tyr Ser Leu Arg Trp Ile Ser
50 55 60
Asp His Glu Tyr Leu Tyr Lys Gln Glu Asn Asn Ile Leu Val Phe Asn
65 70 75 80
Ala Glu Tyr Gly Asn Ser Ser Val Phe Leu Glu Asn Ser Thr Phe Asp
85 90 95
Glu Phe Gly His Ser Ile Asn Asp Tyr Ser Ile Ser Pro Asp Gly Gln
100 105 110
Phe Ile Leu Leu Glu Tyr Asn Tyr Val Lys Gln Trp Arg His Ser Tyr
115 120 125
Thr Ala Ser Tyr Asp Ile Tyr Asp Leu Asn Lys Arg Gln Leu Ile Thr
130 135 140
Glu Glu Arg Ile Pro Asn Asn Thr Gln Trp Val Thr Trp Ser Pro Val
145 150 155 160
Gly His Lys Leu Ala Tyr Val Trp Asn Asn Asp Ile Tyr Val Lys Ile
165 170 175
Glu Pro Asn Leu Pro Ser Tyr Arg Ile Thr Trp Thr Gly Lys Glu Asp
180 185 190
Ile Ile Tyr Asn Gly Ile Thr Asp Trp Val Tyr Glu Glu Glu Val Phe
195 200 205
Ser Ala Tyr Ser Ala Leu Trp Trp Ser Pro Asn Gly Thr Phe Leu Ala
210 215 220
Tyr Ala Gln Phe Asn Asp Thr Glu Val Pro Leu Ile Glu Tyr Ser Phe
225 230 235 240
Tyr Ser Asp Glu Ser Leu Gln Tyr Pro Lys Thr Val Arg Val Pro Tyr
245 250 255
Pro Lys Ala Gly Ala Val Asn Pro Thr Val Lys Phe Phe Val Val Asn
260 265 270

Thr Asp Ser Leu Ser Ser Val Thr Asn Ala Thr Ser Ile Gln Ile Thr
275 280 285
Ala Pro Ala Ser Met Leu Ile Gly Asp His Tyr Leu Cys Asp Val Thr
290 295 300
Trp Ala Thr Gln Glu Arg Ile Ser Leu Gln Trp Leu Arg Arg Ile Gln
305 310 315 320
Asn Tyr Ser Val Met Asp Ile Cys Asp Tyr Asp Glu Ser Ser Gly Arg
325 330 335
Trp Asn Cys Leu Val Ala Arg Gln His Ile Glu Met Ser Thr Thr Gly
340 345 350
Trp Val Gly Arg Phe Arg Pro Ser Glu Pro His Phe Thr Leu Asp Gly
355 360 365
Asn Ser Phe Tyr Lys Ile Ile Ser Asn Glu Glu Gly Tyr Arg His Ile
370 375 380
Cys Tyr Phe Gln Ile Asp Lys Lys Asp Cys Thr Phe Ile Thr Lys Gly
385 390 395 400
Thr Trp Glu Val Ile Gly Ile Glu Ala Leu Thr Ser Asp Tyr Leu Tyr
405 410 415
Tyr Ile Ser Asn Glu Tyr Lys Gly Met Pro Gly Gly Arg Asn Leu Tyr
420 425 430
Lys Ile Gln Leu Ser Asp Tyr Thr Lys Val Thr Cys Leu Ser Cys Glu
435 440 445
Leu Asn Pro Glu Arg Cys Gln Tyr Tyr Ser Val Ser Phe Ser Lys Glu
450 455 460
Ala Lys Tyr Tyr Gln Leu Arg Cys Ser Gly Pro Gly Leu Pro Leu Tyr
465 470 475 480
Thr Leu His Ser Ser Val Asn Asp Lys Gly Leu Arg Val Leu Glu Asp
485 490 495
Asn Ser Ala Leu Asp Lys Met Leu Gln Asn Val Gln Met Pro Ser Lys
500 505 510
Lys Leu Asp Phe Ile Ile Leu Asn Glu Thr Lys Phe Trp Tyr Gln Met
515 520 525
Ile Leu Pro Pro His Phe Asp Lys Ser Lys Lys Tyr Pro Leu Leu Leu
530 535 540
Asp Val Tyr Ala Gly Pro Cys Ser Gln Lys Ala Asp Ile Val Phe Arg
545 550 555 560
Leu Asn Trp Ala Thr Tyr Leu Ala Ser Thr Glu Asn Ile Ile Val Ala
565 570 575
Ser Phe Asp Gly Arg Gly Ser Gly Tyr Gln Gly Asp Lys Ile Met His
580 585 590
Ala Ile Asn Arg Arg Leu Gly Thr Phe Glu Val Glu Asp Gln Ile Glu
595 600 605
Ala Ala Arg Gln Phe Ser Lys Met Gly Phe Val Asp Asn Lys Arg Ile
610 615 620
Ala Ile Trp Gly Trp Ser Tyr Gly Gly Tyr Val Thr Ser Met Val Leu
625 630 635 640
Gly Ser Gly Ser Gly Val Phe Lys Cys Gly Ile Ala Val Ala Pro Val
645 650 655
Ser Arg Trp Glu Tyr Tyr Glu Ser Val Tyr Thr Glu Arg Tyr Met Gly
660 665 670
Leu Pro Thr Pro Glu Asp Asn Leu Asp His Tyr Arg Asn Ser Thr Val
675 680 685
Met Ser Arg Ala Glu Asn Phe Lys Gln Val Glu Tyr Leu Leu Ile His
690 695 700
Gly Thr Ala Asp Asp Asn Val His Phe Gln Gln Ser Ala Gln Ile Ser
705 710 715 720
Lys Ala Leu Val Asp Val Gly Val Asp Phe Gln Ala Met Trp Tyr Thr

725 730 735
Asp Glu Asp His Gly Ile Ala Ser Ser Thr Ala His Gln His Ile Tyr
740 745 750
Thr His Met Ser His Phe Ile Lys Gln Cys Phe Ser Leu Pro
755 760 765

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<212> PRT
<213> Rattus norvegicus

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20 25 30
Ala Ala Ala Asp Ser Ala Arg Thr Tyr Thr Leu Ala Asp Tyr Leu Lys
35 40 45
Asn Thr Phe Arg Val Lys Ser Tyr Ser Leu Arg Trp Val Ser Asp Ser
50 55 60
Glu Tyr Leu Tyr Lys Gln Glu Asn Asn Ile Leu Leu Phe Asn Ala Glu
65 70 75 80
His Gly Asn Ser Ser Ile Phe Leu Glu Asn Ser Thr Phe Glu Ile Phe
85 90 95
Gly Asp Ser Ile Ser Asp Tyr Ser Val Ser Pro Asp Arg Leu Phe Val
100 105 110
Leu Leu Glu Tyr Asn Tyr Val Lys Gln Trp Arg His Ser Tyr Thr Ala
115 120 125
Ser Tyr Ser Ile Tyr Asp Leu Asn Lys Arg Gln Leu Ile Thr Glu Glu
130 135 140
Lys Ile Pro Asn Asn Thr Gln Trp Ile Thr Trp Ser Gln Glu Gly His
145 150 155 160
Lys Leu Ala Tyr Val Trp Lys Asn Asp Ile Tyr Val Lys Ile Glu Pro
165 170 175
His Leu Pro Ser His Arg Ile Thr Ser Thr Gly Lys Glu Asn Val Ile
180 185 190
Phe Asn Gly Ile Asn Asp Trp Val Tyr Glu Glu Glu Ile Phe Gly Ala
195 200 205
Tyr Ser Ala Leu Trp Trp Ser Pro Asn Gly Thr Phe Leu Ala Tyr Ala
210 215 220
Gln Phe Asn Asp Thr Gly Val Pro Leu Ile Glu Tyr Ser Phe Tyr Ser
225 230 235 240
Asp Glu Ser Leu Gln Tyr Pro Lys Thr Val Trp Ile Pro Tyr Pro Lys
245 250 255
Ala Gly Ala Val Asn Pro Thr Val Lys Phe Phe Ile Val Asn Thr Asp
260 265 270
Ser Leu Ser Ser Thr Thr Thr Thr Ile Pro Met Gln Ile Thr Ala Pro
275 280 285
Ala Ser Val Thr Thr Gly Asp His Tyr Leu Cys Asp Val Ala Trp Val
290 295 300
Ser Glu Asp Arg Ile Ser Leu Gln Trp Leu Arg Arg Ile Gln Asn Tyr
305 310 315 320
Ser Val Met Ala Ile Cys Asp Tyr Asp Lys Thr Thr Leu Val Trp Asn
325 330 335
Cys Pro Thr Thr Arg Glu His Ile Glu Thr Ser Ala Thr Gly Trp Cys
340 345 350

Gly Arg Phe Arg Pro Ala Glu Pro His Phe Thr Ser Asp Gly Ser Ser
355 360 365
Phe Tyr Lys Ile Val Ser Asp Lys Asp Gly Tyr Lys His Ile Cys Gln
370 375 380
Phe Gln Lys Asp Arg Lys Pro Glu Gln Val Cys Thr Phe Ile Thr Lys
385 390 395 400
Gly Ala Trp Glu Val Ile Ser Ile Glu Ala Leu Thr Ser Asp Tyr Leu
405 410 415
Tyr Tyr Ile Ser Asn Glu Tyr Lys Glu Met Pro Gly Gly Arg Asn Leu
420 425 430
Tyr Lys Ile Gln Leu Thr Asp His Thr Asn Lys Lys Cys Leu Ser Cys
435 440 445
Asp Leu Asn Pro Glu Arg Cys Gln Tyr Tyr Ser Val Ser Leu Ser Lys
450 455 460
Glu Ala Lys Tyr Tyr Gln Leu Gly Cys Arg Gly Pro Gly Leu Pro Leu
465 470 475 480
Tyr Thr Leu His Arg Ser Thr Asp Gln Lys Glu Leu Arg Val Leu Glu
485 490 495
Asp Asn Ser Ala Leu Asp Lys Met Leu Gln Asp Val Gln Met Pro Ser
500 505 510
Lys Lys Leu Asp Phe Ile Val Leu Asn Glu Thr Arg Phe Trp Tyr Gln
515 520 525
Met Ile Leu Pro Pro His Phe Asp Lys Ser Lys Lys Tyr Pro Leu Leu
530 535 540
Ile Asp Val Tyr Ala Gly Pro Cys Ser Gln Lys Ala Asp Ala Ala Phe
545 550 555 560
Arg Leu Asn Trp Ala Thr Tyr Leu Ala Ser Thr Glu Asn Ile Ile Val
565 570 575
Ala Ser Phe Asp Gly Arg Gly Ser Gly Tyr Gln Gly Asp Lys Ile Met
580 585 590
His Ala Ile Asn Lys Arg Leu Gly Thr Leu Glu Val Glu Asp Gln Ile
595 600 605
Glu Ala Ala Arg Gln Phe Leu Lys Met Gly Phe Val Asp Ser Lys Arg
610 615 620
Val Ala Ile Trp Gly Trp Ser Tyr Gly Gly Tyr Val Thr Ser Met Val
625 630 635 640
Leu Gly Ser Gly Ser Gly Val Phe Lys Cys Gly Ile Ala Val Ala Pro
645 650 655
Val Ser Arg Trp Glu Tyr Tyr Asp Ser Val Tyr Thr Glu Arg Tyr Met
660 665 670
Gly Leu Pro Thr Pro Glu Asp Asn Leu Asp His Tyr Arg Asn Ser Thr
675 680 685
Val Met Ser Arg Ala Glu Asn Phe Lys Gln Val Glu Tyr Leu Leu Ile
690 695 700
His Gly Thr Ala Asp Asp Asn Val His Phe Gln Gln Ser Ala Gln Ile
705 710 715 720
Ser Lys Ala Leu Val Asp Ala Gly Val Asp Phe Gln Ala Met Trp Tyr
725 730 735
Thr Asp Glu Asp His Gly Ile Ala Ser Ser Thr Ala His Gln His Ile
740 745 750
Tyr Ser His Met Ser His Phe Leu Gln Gln Cys Phe Ser Leu Arg
755 760 765

<210> 3
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<212> PRT

<213> Mus musculus

<400> 3

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Met Lys Thr Pro Trp Lys Val Leu Leu Gly Leu Leu Gly Val Ala Ala
 1               5                  10                  15
Leu Val Thr Ile Ile Thr Val Pro Ile Val Leu Leu Ser Lys Asp Glu
            20                  25                  30
Ala Ala Ala Asp Ser Arg Arg Thr Tyr Ser Leu Ala Asp Tyr Leu Lys
        35                  40                  45
Ser Thr Phe Arg Val Lys Ser Tyr Ser Leu Trp Trp Val Ser Asp Phe
    50                  55                  60
Glu Tyr Leu Tyr Lys Gln Glu Asn Asn Ile Leu Leu Leu Asn Ala Glu
65                  70                  75                  80
His Gly Asn Ser Ser Ile Phe Leu Glu Asn Ser Thr Phe Glu Ser Phe
                85                  90                  95
Gly Tyr His Ser Val Ser Pro Asp Arg Leu Phe Val Leu Leu Glu Tyr
            100                 105                 110
Asn Tyr Val Lys Gln Trp Arg His Ser Tyr Thr Ala Ser Tyr Asn Ile
        115                 120                 125
Tyr Asp Val Asn Lys Arg Gln Leu Ile Thr Glu Glu Lys Ile Pro Asn
    130                 135                 140
Asn Thr Gln Trp Ile Thr Trp Ser Pro Glu Gly His Lys Leu Ala Tyr
145                 150                 155                 160
Val Trp Lys Asn Asp Ile Tyr Val Lys Val Glu Pro His Leu Pro Ser
                165                 170                 175
His Arg Ile Thr Ser Thr Gly Glu Glu Asn Val Ile Tyr Asn Gly Ile
            180                 185                 190
Thr Asp Trp Val Tyr Glu Glu Glu Val Phe Gly Ala Tyr Ser Ala Leu
        195                 200                 205
Trp Trp Ser Pro Asn Asn Thr Phe Leu Ala Tyr Ala Gln Phe Asn Asp
    210                 215                 220
Thr Gly Val Pro Leu Ile Glu Tyr Ser Phe Tyr Ser Asp Glu Ser Leu
225                 230                 235                 240
Gln Tyr Pro Lys Thr Val Trp Ile Pro Tyr Pro Lys Ala Gly Ala Val
                245                 250                 255
Asn Pro Thr Val Lys Phe Phe Ile Val Asn Ile Asp Ser Leu Ser Ser
            260                 265                 270
Ser Ser Ser Ala Ala Pro Ile Gln Ile Pro Ala Pro Ala Ser Val Ala
        275                 280                 285
Arg Gly Asp His Tyr Leu Cys Asp Val Val Trp Ala Thr Glu Glu Arg
    290                 295                 300
Ile Ser Leu Gln Trp Leu Arg Arg Ile Gln Asn Tyr Ser Val Met Ala
305                 310                 315                 320
Ile Cys Asp Tyr Asp Lys Ile Asn Leu Thr Trp Asn Cys Pro Ser Glu
                325                 330                 335
Gln Gln His Val Glu Met Ser Thr Thr Gly Trp Val Gly Arg Phe Arg
            340                 345                 350
Pro Ala Glu Pro Tyr Leu Thr Ser Asp Gly Ser Ser Phe Tyr Lys Ile
        355                 360                 365
Ile Ser Asp Lys Asp Gly Tyr Lys His Ile Cys His Phe Pro Lys Asp
    370                 375                 380
Lys Lys Asp Cys Thr Phe Ile Thr Lys Gly Ala Trp Glu Val Ile Ser
385                 390                 395                 400
Ile Glu Ala Leu Thr Ser Asp Tyr Leu Tyr Tyr Ile Ser Asn Gln Tyr
                405                 410                 415
Lys Glu Met Pro Gly Gly Arg Asn Leu Tyr Lys Ile Gln Leu Thr Asp
            420                 425                 430
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His Thr Asn Val Lys Cys Leu Ser Cys Asp Leu Asn Pro Glu Arg Cys
        435                 440                 445
Gln Tyr Tyr Ala Val Ser Phe Ser Lys Glu Ala Lys Tyr Tyr Gln Leu
    450                 455                 460
Gly Cys Trp Gly Pro Gly Leu Pro Leu Tyr Thr Leu His Arg Ser Thr
465                 470                 475                 480
Asp His Lys Glu Leu Arg Val Leu Glu Asp Asn Ser Ala Leu Asp Arg
                485                 490                 495
Met Leu Gln Asp Val Gln Met Pro Ser Lys Lys Leu Asp Phe Ile Val
            500                 505                 510
Leu Asn Glu Thr Arg Phe Trp Tyr Gln Met Ile Leu Pro Pro His Phe
        515                 520                 525
Asp Lys Ser Lys Lys Tyr Pro Leu Leu Leu Asp Val Tyr Ala Gly Pro
    530                 535                 540
Cys Ser Gln Lys Ala Asp Ala Ser Phe Arg Leu Asn Trp Ala Thr Tyr
545                 550                 555                 560
Leu Ala Ser Thr Glu Asn Ile Ile Val Ala Ser Phe Asp Gly Arg Gly
                565                 570                 575
Ser Gly Tyr Gln Gly Asp Lys Ile Met His Ala Ile Asn Arg Arg Leu
            580                 585                 590
Gly Thr Leu Glu Val Glu Asp Gln Ile Glu Ala Ala Arg Gln Phe Val
        595                 600                 605
Lys Met Gly Phe Val Asp Ser Lys Arg Val Ala Ile Trp Gly Trp Ser
    610                 615                 620
Tyr Gly Gly Tyr Val Thr Ser Met Val Leu Gly Ser Gly Ser Gly Val
625                 630                 635                 640
Phe Lys Cys Gly Ile Ala Val Ala Pro Val Ser Arg Trp Glu Tyr Tyr
                645                 650                 655
Asp Ser Val Tyr Thr Glu Arg Tyr Met Gly Leu Pro Ile Pro Glu Asp
            660                 665                 670
Asn Leu Asp His Tyr Arg Asn Ser Thr Val Met Ser Arg Ala Glu His
        675                 680                 685
Phe Lys Gln Val Glu Tyr Leu Leu Ile His Gly Thr Ala Asp Asp Asn
    690                 695                 700
Val His Phe Gln Gln Ser Ala Gln Ile Ser Lys Val Leu Val Asp Ala
705                 710                 715                 720
Gly Val Asp Phe Gln Ala Met Trp Tyr Thr Asp Glu Asp His Gly Ile
                725                 730                 735
Ala Ser Ser Thr Ala His Gln His Ile Tyr Ser His Met Ser His Phe
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Leu Gln Gln Cys Phe Ser Leu His
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<213> Homo sapiens

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Val Pro Leu Leu Glu Asp
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<210> 5
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<212> PRT

<213> Artificial Sequence

<220>
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<400> 5
Val Val His Phe Phe Lys Asn Ile Val Thr Pro Arg Thr Pro Pro Pro
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Ser Gln Gly Lys
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<210> 6
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
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<400> 6
Glu Asn Pro Val Val His Phe Phe Lys Asn Ile Val Thr Pro Arg Thr
1 5 10 15
Pro

<210> 7
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
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<400> 7
Ala Ser Gln Lys Arg Pro Ser Gln Arg Ser Lys
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<210> 8
<211> 11
<212> PRT
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<400> 8
Ala Asn Met Gln Arg Gln Ala Val Pro Thr Leu
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<210> 9
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<400> 9
Thr Gly Thr Glu Lys Leu Ile Glu Thr Tyr Phe Ser Lys Asn Tyr Gln
1 5 10 15
Asp Tyr Glu Tyr Leu
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<210> 10
<211> 18
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<213> Artificial Sequence

<220>
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<400> 10
Gly Phe Tyr Thr Thr Gly Ala Val Arg Gln Ile Phe Gly Asp Tyr Lys
1 5 10 15
Thr Thr

<210> 11
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<220>
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<400> 11
Tyr Lys Thr Thr Ile Cys Gly Lys Gly Leu Ser Ala Thr Val Thr Gly
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Gly Gln

<210> 12
<211> 19
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<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 12
Ser Arg Gly Gln His Gln Ala His Ser Leu Glu Arg Val Cys His Cys
1 5 10 15
Leu Gly Lys

<210> 13

<211> 16
<212> PRT
<213> Artificial Sequence

<220>
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<400> 13
His Cys Leu Gly Lys Trp Leu Gly His Pro Asp Lys Phe Val Gly Ile
1 5 10 15

<210> 14
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
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<400> 14
Met Glu Ser Ala Leu Asp Gln Leu Lys Gln Phe Thr Thr Val Val
1 5 10 15

<210> 15
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<400> 15
Glu Thr Thr Val Val Ala Asp Thr Gly Asp Phe His Ala Ile Asp
1 5 10 15

<210> 16
<211> 15
<212> PRT
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<400> 16
Phe His Ala Ile Asp Glu Tyr Lys Pro Gln Asp Ala Thr Thr Asn
1 5 10 15

<210> 17
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<212> PRT
<213> Artificial Sequence

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<400> 17
Lys Leu Gly Gly Ser Gln Glu Asp Gln Ile Lys Asn Ala Ile Asp
1 5 10 15

<210> 18
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<213> Artificial Sequence

<220>
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<400> 18
Lys Asn Ala Ile Asp Lys Leu Phe Val Leu Phe Gly Ala Glu Ile
1 5 10 15

<210> 19
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<400> 19
Gly Glu Leu Leu Gln Asp Asn Ala Lys Leu Val Pro Val Leu Ser
1 5 10 15

<210> 20
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<212> PRT
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<400> 20
Val Pro Val Leu Ser Ala Lys Ala Ala Gln Ala Ser Asp Leu Glu
1 5 10 15

<210> 21
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<212> PRT
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<400> 21
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1 5 10 15

<210> 22
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<400> 22
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1 5 10 15
Gly Asp Glu Val
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<210> 23
<211> 20
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<213> Artificial Sequence

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Gln Ala Pro Glu Tyr Arg Gly Arg Thr Glu Leu Leu Lys Asp Ala Ile
1 5 10 15
Gly Glu Gly Lys
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<210> 24
<211> 20
<212> PRT
<213> Artificial Sequence

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<400> 24
Arg Asp His Ser Tyr Gln Glu Glu Ala Ala Met Glu Leu Lys Val Glu
1 5 10 15
Asp Pro Phe Tyr
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<210> 25
<211> 16
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1 5 10 15

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Tyr Gln Lys Lys Glu Glu Asp Trp
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<211> 27
<212> PRT
<213> Artificial Sequence

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<400> 27
Thr Val Thr Val Pro Ile Ala Leu Gly Glu Ser Asp Phe Glu Asn Leu
1 5 10 15
Asn Thr Glu Glu Phe Ser Ser Glu Ser Asp Met
20 25

<210> 28
<211> 27
<212> PRT
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<400> 28
Thr Val Thr Val Pro Ile Ala Val Gly Glu Ser Asp Phe Glu Asn Leu
1 5 10 15
Asn Thr Glu Glu Phe Ser Ser Glu Ser Glu Leu
20 25

<210> 29
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
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<400> 29

Thr Val Thr Val Pro Ile Ala Val Gly Glu Ser Asp Phe Glu Asn Leu
1 5 10 15
Asn Thr Glu Asp Phe Ser Ser Glu Ser Asp Leu
20 25

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<213> Artificial Sequence

<220>
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Asn Thr Glu Asp Val Ser Ser Glu Ser Asp Pro
20 25

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<211> 21
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<220>
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1 5 10 15
Asn Asp Ala Ala Cys
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<210> 32
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
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<400> 32
Phe Leu Glu Asp Val Pro Leu Leu Glu Asp Ile Pro Leu Leu Glu Asp
1 5 10 15
Val Pro Leu Leu Glu Asp
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<210> 33
<211> 18
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<400> 33
Phe Leu Glu Asp Val Pro Leu Leu Glu Asp Ile Pro Leu Leu Glu Asp
1 5 10 15
Val Pro

<210> 34
<211> 18
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<220>
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<400> 34
Leu Leu Glu Asp Thr Asp Phe Leu Glu Asp Pro Asp Phe Leu Glu Ala
1 5 10 15
Ile Asp

<210> 35
<211> 42
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<213> Artificial Sequence

<220>
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<400> 35
Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys
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Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile
20 25 30
Gly Leu Met Val Gly Gly Val Val Ile Ala
35 40

<210> 36
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
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<400> 36
Met Glu Cys Glu Lys Asn Leu Tyr Trp Ile Cys Asn Lys Pro Tyr Lys
1 5 10 15

<210> 37
<211> 26
<212> PRT

<213> Artificial Sequence

<220>
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<400> 37
Pro Tyr Lys Cys Pro Glu Cys Gly Lys Ser Phe Ser Gln Lys Ser Asp
1 5 10 15
Leu Val Lys His Gln Arg Thr His Thr Gly
20 25

<210> 38
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
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<400> 38
Glu Glu Glu Asp Lys Lys Glu Asp Val Gly Thr Val Val Gly Ile
1 5 10 15

<210> 39
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
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<400> 39
Asn Tyr Thr Arg Leu Arg Lys Gln Met Ala Val Lys Lys Tyr Leu
1 5 10 15

<210> 40
<211> 21
<212> PRT
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<220>
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<400> 40
Gln Pro Phe Arg Pro Gln Gln Pro Tyr Pro Gln Pro Gln Pro Gln Tyr
1 5 10 15
Ser Gln Pro Gln Gln
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<210> 41
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
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<400> 41
Gln Pro Tyr Pro Gln Pro Gln Pro Gln Tyr Ser Gln Pro Gln Gln Pro
1 5 10 15
Ile Ser Gln Gln Gln
20

<210> 42
<211> 21
<212> PRT
<213> Artificial Sequence

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<400> 42
Gln Phe Leu Gly Gln Gln Gln Pro Phe Pro Pro Gln Gln Pro Tyr Pro
1 5 10 15
Gln Pro Gln Pro Phe
20

<210> 43
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<400> 43
Pro Leu Val Gln Gln Gln Gln Phe Leu Gly Gln Gln Gln Pro Phe Pro
1 5 10 15
Pro Gln Gln Pro Tyr
20

<210> 44
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<212> PRT
<213> Artificial Sequence

<220>
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<400> 44
His Asn Val Val His Ala Ile Ile Leu His Gln Gln Gln Gln Gln Gln
1 5 10 15
Gln Glu Gln Lys Gln
20

<210> 45

<211> 17
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<213> Artificial Sequence

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<400> 45
Asn Pro Ser Gln Gln Gln Pro Gln Glu Gln Val Pro Leu Val Gln Gln
1 5 10 15
Gln

<210> 46
<211> 19
<212> PRT
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<220>
<223> synthetically prepared peptide sequence

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1 5 10 15
Gln Pro Phe

<210> 47
<211> 8
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<400> 47
Tyr Pro Phe Pro Gly Pro Ile Pro
1 5

<210> 48
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<400> 48
Gly Tyr Tyr Pro Thr Tyr Gly Gly Trp Leu
1 5 10

<210> 49
<211> 27

<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 49
His Ser Asp Gly Thr Phe Thr Ser Glu Leu Ser Arg Leu Arg Glu Gly
1 5 10 15
Ala Arg Leu Gln Arg Leu Leu Gln Gly Leu Val
20 25

<210> 50
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 50
Thr Pro Pro Leu Leu Ala Ala Ile Leu Met Leu Ala Ser Leu Arg Ser
1 5 10 15
His Ile Val Ser Asp His Phe Pro Val Asn Phe Arg Lys Phe
20 25 30

<210> 51
<211> 199
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 51
Arg Pro Lys His Pro Ile Lys His Gln Gly Leu Pro Gln Glu Val Leu
1 5 10 15
Asn Glu Asn Leu Leu Arg Phe Phe Val Ala Pro Phe Pro Glu Val Phe
20 25 30
Gly Lys Glu Lys Val Asn Glu Leu Ser Lys Asp Ile Gly Ser Glu Ser
35 40 45
Thr Asp Glu Gln Ala Met Glu Asp Ile Lys Gln Met Glu Ala Glu Ser
50 55 60
Ile Ser Ser Ser Glu Glu Ile Val Pro Asn Ser Val Glu Gln Lys His
65 70 75 80
Ile Gln Lys Glu Asp Val Pro Ser Glu Arg Tyr Leu Gly Tyr Leu Glu
85 90 95
Gln Leu Leu Arg Leu Lys Lys Tyr Lys Val Pro Gln Leu Glu Ile Val
100 105 110
Pro Asn Ser Ala Glu Glu Arg Leu His Ser Met Lys Glu Gly Ile His
115 120 125
Ala Gln Gln Lys Glu Pro Met Ile Gly Val Asn Gln Glu Leu Ala Tyr
130 135 140
Phe Tyr Pro Glu Leu Phe Arg Gln Phe Tyr Gln Leu Asp Ala Tyr Pro
145 150 155 160

Ser Gly Ala Trp Tyr Tyr Val Pro Leu Gly Thr Gln Tyr Thr Asp Ala
165 170 175
Pro Ser Phe Ser Asp Ile Pro Asn Pro Ile Gly Ser Glu Asn Ser Glu
180 185 190
Lys Thr Thr Met Pro Leu Trp
195

<210> 52
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 52
Met Lys Glu Gly Ile His Ala Gln Gln Lys
1 5 10

<210> 53
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 53
Tyr Gln Lys Phe Ala Leu Pro Gln Tyr Leu
1 5 10

<210> 54
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 54
Lys Asp Glu Arg Phe Phe Ser Asp Lys Ile
1 5 10

<210> 55
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 55
Ser Pro Pro Glu Ile Asn Thr Val Gln Val

1 5 10

<210> 56
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 56
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 57
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 57
Tyr Ser Ala Asn Ser Asn Pro Ala Met Ala Pro Arg Glu Arg Lys Ala
1 5 10 15
Gly Cys Lys Asn Phe Phe Trp Lys Thr Phe Thr Ser Cys
20 25

<210> 58
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 58
Arg Gln Lys Pro Gln Gln Phe Phe Gly Leu Met
1 5 10

<210> 59
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 59
Cys Tyr Lys Gln Asn Cys Pro Leu Gly
1 5

<210> 60
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 60
Ala Pro Leu Glu Pro Val Tyr Pro Gly Asp Asn Ala Thr Pro Glu Gln
 1   5   10   15
Met Ala Gln Tyr Ala Ala Asp Leu Arg Arg Tyr Ile Asn Met Leu Thr
            20   25   30
Arg Pro Arg Tyr
        35

<210> 61
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 61
Glu Gly Pro Trp Leu Glu Glu Glu Glu Glu Ala Tyr Gly Trp Met Asp
 1   5   10   15
Phe

<210> 62
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 62
Glu Leu Gly Pro Gln Gly Pro Pro His Leu Val Ala Asp Pro Ser Lys
 1   5   10   15
Lys Gln Gly Pro Trp Leu Glu Glu Glu Glu Glu Ala Tyr Gly Trp Met
            20   25   30
Asp Phe

<210> 63
<211> 27
<212> PRT
<213> Artificial Sequence

<220>

<223> synthetically prepared peptide sequence

<400> 63
Val Pro Leu Pro Ala Gly Gly Gly Thr Val Leu Thr Lys Met Tyr Pro
1 5 10 15
Arg Gly Asn His Trp Ala Val Gly His Leu Met
20 25

<210> 64
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 64
Tyr Gly Gly Phe Leu Met
1 5

<210> 65
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 65
Tyr Gly Gly Phe Met Thr Ser Glu Lys Ser Gln Thr Pro Leu Val Thr
1 5 10 15
Leu Phe Lys Asn Ala Ile Ile Lys Asn Ala Tyr Lys Lys Gly Glu
20 25 30

<210> 66
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 66
Cys Ser Cys Ser Ser Leu Met Asp Lys Glu Cys Val Tyr Phe Cys His
1 5 10 15
Leu Asp Ile Ile Trp Val Asn Thr Pro Glu His Val Val Pro Tyr Gly
20 25 30
Leu Gly Ser Pro Arg Ser
35

<210> 67
<211> 17
<212> PRT

<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 67
Tyr Gly Gly Phe Leu Arg Arg Ile Arg Pro Lys Leu Lys Trp Asp Asn
1 5 10 15
Gln

<210> 68
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 68
Tyr Gly Gly Phe Leu Arg Arg Gln Phe Lys Val Val Thr
1 5 10

<210> 69
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 69
Met Pro His Leu Leu Ser Gly Phe Leu Glu Val Thr Ala Ser Pro Ala
1 5 10 15
Pro Thr Trp Asp Ala Pro
20

<210> 70
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 70
Ile Phe Gly His Phe Phe Cys Asn Val Phe Ile Ala Met Asp Val Met
1 5 10 15
Cys Cys Thr Ala Ser Ile
20

<210> 71
<211> 22

<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 71
Leu Lys Leu Ala Glu Arg Pro Glu Arg Ser Glu Phe Val Leu Gln Asn
1 5 10 15
Ser Asp His Cys Gly Lys
20

<210> 72
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 72
Ser Phe Arg Pro Gly Ser Arg Gly Gly Ser Arg Gly
1 5 10

<210> 73
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 73
Glu Gln Phe Leu Asp Gly Asp Gly Trp Thr Ser Arg Trp Ile Glu Ser
1 5 10 15
Gly Leu Gln Thr Ser Gln
20

<210> 74
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 74
Phe Val Pro Ile Phe Thr Tyr Gly Glu Leu Gln Arg Met Gln Glu Lys
1 5 10 15
Glu Arg Asn Lys Gly Gln
20

<210> 75

<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 75
Leu Lys Gln Ile Ala Ala His Ala Gly Lys Glu Gly Ala Ile Ile Phe
 1   5   10   15
Gln Gln Val Met
            20

<210> 76
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 76
Met Leu Arg Leu Pro Thr Val Phe Arg Gln Met Arg Pro Val Ser Arg
 1   5   10   15
Val Leu Ala Pro
            20

<210> 77
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 77
Arg Val Leu Ala Pro His Leu Thr Arg Ala Tyr Ala Lys Asp Val Lys
 1   5   10   15
Phe Gly Ala Asp
            20

<210> 78
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 78
Lys Phe Gly Ala Asp Ala Arg Ala Leu Met Leu Gln Gly Val Asp Leu
 1   5   10   15
Leu Ala Asp Ala
            20

<210> 79
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 79
Leu Leu Ala Asp Ala Val Ala Val Thr Met Gly Pro Lys Gly Arg Thr
 1   5   10   15
Val Ile Ile Glu
            20

<210> 80
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 80
Thr Val Ile Ile Glu Gln Ser Trp Gly Ser Pro Lys Val Thr Lys Asp
 1   5   10   15
Gly Val Thr Val
            20

<210> 81
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 81
Asp Gly Val Thr Val Ala Lys Ser Ile Asp Leu Lys Asp Lys Tyr Lys
 1   5   10   15
Asn Ile Gly Ala
            20

<210> 82
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 82
Lys Asn Ile Gly Ala Lys Leu Val Gln Asp Val Ala Asn Asn Thr Asn

1 5 10 15
Glu Glu Ala Gly
20

<210> 83
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 83
Asn Glu Glu Ala Gly Asp Gly Thr Thr Thr Ala Thr Val Leu Ala Arg
1 5 10 15
Ser Ile Ala Lys
20

<210> 84
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 84
Arg Ser Ile Ala Lys Glu Gly Phe Glu Lys Ile Ser Lys Gly Ala Asn
1 5 10 15
Pro Val Glu Ile
20

<210> 85
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 85
Asn Pro Val Glu Ile Arg Arg Gly Val Met Leu Ala Val Asp Ala Val
1 5 10 15
Ile Ala Glu Leu
20

<210> 86
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 86
Val Ile Ala Glu Leu Lys Lys Gln Ser Lys Pro Val Thr Thr Pro Glu
1 5 10 15
Glu Ile Ala Gln
20

<210> 87
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 87
Glu Glu Ile Ala Gln Val Ala Thr Ile Ser Ala Asn Gly Asp Lys Glu
1 5 10 15
Ile Gly Asn Ile
20

<210> 88
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 88
Glu Ile Gly Asn Ile Ile Ser Asp Ala Met Lys Lys Val Gly Arg Lys
1 5 10 15
Gly Val Ile

<210> 89
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 89
Arg Lys Gly Val Ile Thr Val Lys Asp Gly Lys Thr Leu Asn Asp Glu
1 5 10 15
Leu Glu Ile Ile
20

<210> 90
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 90
Glu Leu Glu Ile Ile Glu Gly Met Lys Phe Asp Arg Gly Tyr Ile Ser
 1   5   10   15
Pro Tyr Phe Ile
            20

<210> 91
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 91
Ser Pro Tyr Phe Ile Asn Thr Ser Lys Gly Gln Lys Cys Glu Phe Gln
 1   5   10   15
Asp Ala Tyr Val
            20

<210> 92
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 92
Gln Asp Ala Tyr Val Leu Leu Ser Glu Lys Lys Ile Ser Ser Ile Gln
 1   5   10   15
Ser Ile Val Pro
            20

<210> 93
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 93
Gln Ser Ile Val Pro Ala Leu Glu Ile Ala Asn Ala His Arg Lys Pro
 1   5   10   15
Leu Val Ile Ile Ala
            20

<210> 94

<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 94
Leu Val Ile Ile Ala Glu Asp Val Asp Gly Glu Ala Leu Ser Thr Leu
1 5 10 15
Val Leu Asn Arg
20

<210> 95
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 95
Leu Val Leu Asn Arg Leu Lys Val Gly Leu Gln Val Val Ala Val Lys
1 5 10 15
Ala Pro Gly Phe
20

<210> 96
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 96
Lys Ala Pro Gly Phe Gly Asp Asn Arg Lys Asn Gln Leu Lys Asp Met
1 5 10 15
Ala Ile Ala Thr
20

<210> 97
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 97
Met Ala Ile Ala Thr Gly Gly Ala Val Phe Gly Glu Glu Gly Leu Thr
1 5 10 15
Leu Asn Leu Glu
20

<210> 98
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 98
Thr Leu Asn Leu Glu Asp Val Gln Pro His Asp Leu Gly Lys Val Gly
 1   5   10   15
Glu Val Ile Val
            20

<210> 99
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 99
Gly Glu Val Ile Val Thr Lys Asp Asp Ala Met Leu Leu Lys Gly Lys
 1   5   10   15
Gly Asp Lys Ala
            20

<210> 100
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 100
Lys Gly Asp Lys Ala Gln Ile Glu Lys Arg Ile Gln Glu Ile Ile Glu
 1   5   10   15
Gln Leu Asp Val
            20

<210> 101
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 101
Glu Gln Leu Asp Val Thr Thr Ser Glu Tyr Glu Lys Glu Lys Leu Asn

1 5 10 15
Glu Arg Leu Ala
20

<210> 102
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 102
Asn Glu Arg Leu Ala Lys Leu Ser Asp Gly Val Ala Val Leu Lys Val
1 5 10 15
Gly Gly Thr Ser
20

<210> 103
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 103
Val Gly Gly Thr Asp Val Glu Val Asn Glu Lys Lys Asp Arg Val Thr
1 5 10 15
Asp Ala Leu

<210> 104
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 104
Val Thr Asp Ala Leu Asn Ala Thr Arg Ala Ala Val Glu Glu Gly Ile
1 5 10 15
Val Leu Gly Gly
20

<210> 105
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 105
Ile Val Leu Gly Gly Gly Cys Ala Leu Leu Arg Cys Ile Pro Ala Leu
 1   5   10   15
Asp Ser Leu Thr
            20

<210> 106
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 106
Leu Asp Ser Leu Thr Pro Ala Asn Glu Asp Gln Lys Ile Gly Ile Glu
 1   5   10   15
Ile Ile Lys Arg
            20

<210> 107
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 107
Glu Ile Ile Lys Arg Thr Leu Lys Ile Pro Ala Met Thr Ile Ala Lys
 1   5   10   15
Asn Ala Gly Val
            20

<210> 108
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 108
Lys Asn Ala Gly Val Glu Gly Ser Leu Ile Val Glu Lys Ile Met Gln
 1   5   10   15
Ser Ser Ser Glu
            20

<210> 109
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 109
Gln Ser Ser Ser Glu Val Gly Tyr Asp Ala Met Ala Gly Asp Phe Val
 1   5   10   15
Asn Met Val Glu
            20

<210> 110
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
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<400> 110
Val Asn Met Val Glu Lys Gly Ile Ile Asp Pro Thr Lys Val Val Arg
 1   5   10   15
Thr Ala Leu Leu
            20

<210> 111
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 111
Arg Thr Ala Leu Leu Asp Ala Ala Gly Val Ala Ser Leu Leu Thr Thr
 1   5   10   15
Ala Glu Val Val
            20

<210> 112
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 112
Thr Ala Glu Val Val Val Thr Glu Ile Pro Lys Glu Glu Lys Asp Pro
 1   5   10   15
Gly Met Gly Ala
            20

<210> 113

<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 113
Pro Gly Met Gly Ala Met Gly Gly Met Gly Gly Gly Met Gly Gly Gly
 1   5   10   15
Met Phe

<210> 114
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 114
Val Leu Gly Gly Gly Val Leu Leu Leu Arg Val Ile Pro Ala Leu Asp
 1   5   10   15
Ser Leu Thr Pro Ala Asn Glu Asp
            20

<210> 115
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 115
Met Lys Thr Pro Trp Arg Val Leu Leu Gly Leu Leu Gly Ala Ala Ala
 1   5   10   15
Leu Val Thr Ile Ile Thr Val Pro Val Val Leu Leu Asn Lys
            20   25   30

<210> 116
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 116
Met Ala Glu Tyr Gly Asn Ser Ser Val Phe Leu Glu Asn Ser Thr Phe
 1   5   10   15
Asp Glu Phe Gly His
            20

<210> 117
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 117
Lys Arg Gln Leu Ile Thr Glu Glu Arg Ile Pro Asn Asn Thr Gln Trp
 1   5   10   15
Val Thr Trp Ser Pro
            20

<210> 118
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 118
Asn Gly Thr Phe Leu Ala Tyr Ala Gln Phe Asn Asp Thr Glu Val Pro
 1   5   10   15
Leu Ile Glu Tyr Ser
            20

<210> 119
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
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<400> 119
Val Thr Asn Ala Thr Ser Ile Gln Ile Thr Ala Pro Ala Ser Met Leu
 1   5   10   15
Ile Gly Asp His Tyr
            20

<210> 120
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 120
Ile Gln Asn Tyr Ser Val Met Asp Ile Cys Asp Tyr Asp Glu Ser Ser

1 5 10 15
Gly Arg Trp Asn Cys
20

<210> 121
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
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<400> 121
Asn Ser Phe Tyr Lys Ile Ile Ser Asn Glu Glu Gly Tyr Arg His Ile
1 5 10 15
Cys Tyr Phe Gln Ile
20

<210> 122
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 122
Asn Val Gln Met Pro Ser Lys Lys Leu Asp Phe Ile Ile Leu Asn Glu
1 5 10 15
Thr Lys Phe Trp Tyr
20

<210> 123
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 123
Pro Glu Asp Asn Leu Asp His Tyr Arg Asn Ser Thr Val Met Ser Arg
1 5 10 15
Ala Glu Asn Phe Lys
20

<210> 124
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 124
Thr Ala His Gln His Ile Tyr Thr His Met Ser His Phe Ile Lys Gln
 1   5   10   15
Cys Phe Ser Leu Pro
            20

<210> 125
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 125
Gln Gln Leu Pro Gln Pro Gln Gln Pro Gln Gln Ser Phe Pro Gln Gln
 1   5   10   15
Gln Pro Phe

<210> 126
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 126
Leu Gln Leu Gln Pro Phe Pro Gln Pro Gln Leu Pro Tyr Pro Gln Pro
 1   5   10   15
Gln Leu Pro Tyr
            20

<210> 127
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
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<400> 127
Pro Gln Pro Leu Pro Tyr Pro Gln Pro Gln Pro Phe
 1   5   10

<210> 128
<211> 28
<212> PRT
<213> Artificial Sequence

<220>

<221> VARIANT
<222> 15
<223> Xaa- Any Amino Acid

<223> Synthetically prepared peptide sequence

<400> 128
Gln Gln Pro Gln Gln Phe Glx Pro Gln Gln Pro Tyr Pro Glx Xaa Glx
 1   5   10   15
Pro Glx Leu Gly Glx Glx Glx Pro Phe Pro Pro Glx
            20   25

<210> 129
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 129
Glx Gly Glx Pro Gly Tyr Tyr Pro Thr Ser Pro Glx Glx Pro Gly Gln
 1   5   10   15
Glu Gln

<210> 130
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 130
Glx Thr Glx Ser Leu Val Tyr Pro Phe Pro Gly Pro Ile Pro Asn Ser
 1   5   10   15
Leu Pro

<210> 131
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 131
Leu His Leu Pro Leu Pro Leu Leu Glx Ser Trp Met His Glx Pro His
 1   5   10   15
Glx Pro Leu

<210> 132
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 132
Met Glu Cys Glu Lys Asn Leu Tyr Trp Ile Cys Asn Lys Pro Tyr Lys
 1   5   10   15

<210> 133
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically prepared peptide sequence

<400> 133
Leu Lys Gln Ile Ala Ala His Ala Gly Lys Glu Gly Ala Ile Ile Phe
 1   5   10   15
Gln Gln Val Met
            20